

Domestically acquired, sporadic Shiga toxin-producing *E. coli* O157:H7 infection in FoodNet, 2004-2005

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BACKGROUND: Infections from *E. coli* O157 cause 73,480 illnesses each year in the United States, leading to an estimated 2,168 hospitalizations and 61 deaths annually. When attributing the burden of disease to food-settings in U.S. and food-products, it is important to know the number of cases that are domestically acquired and sporadic. Using active surveillance data from the Foodborne Disease Active Surveillance Network (FoodNet), we determined the proportion of STEC O157 infections acquired internationally and the proportion of domestically acquired infections that were outbreak-associated.

METHODS: FoodNet sites conduct active surveillance for laboratory-confirmed cases of STEC O157 infections in 10 states (CA, CO, CT, GA, MD, MN, NM, NY, OR, & TN). Since 2004, FoodNet personnel have attempted to interview all cases regarding international travel in the 7 days preceding their illness onset (travel-associated), and systematically document STEC O157 cases known to be part of an outbreak (outbreak-associated).

RESULTS: From January 2004 to September 2005, FoodNet ascertained 663 laboratory-confirmed cases of STEC O157. Of these, 21/663 (3%) were travel-associated (range: 33% in NY to 0% cases in CO). Most travel-associated cases were female (71%). Of 642 domestically-acquired cases, 84 (13%) were associated with a known outbreak (range: 21% in MN to 0% cases in NM). Most outbreak-associated cases (81%) were from 4 northern states (CT, MN, NY, and OR). Therefore, of 663 cases of STEC O157, 558 (84%) were domestically-acquired and sporadic (range: 35/40 (88%) in CO to 28/38 (73%) in MD). Among these cases, 357 (67%) were from 4 northern states, 291 (52%) were female, and 288 (52%) occurred during the summer months (June, July, August).

CONCLUSIONS: Most cases (84%) of all laboratory-confirmed STEC O157 ascertained by FoodNet were domestically-acquired sporadic infections. Travel-associated cases were predominately female. Most outbreak-associated cases occurred in northern states. The burden of these domestically acquired sporadic infections can be linked to specific sources by coordinating data from outbreak investigations and sporadic case-control studies, and other data sources.